

Dual-Axis Heliostat for mirror application up to 3,1 m²

- With time-derived astronomical positioning for the automatic sun-tracking
- Dual-Axis solar tracker with embedded positioner
- Time controlled astronomical algorithm for sun-tracking
- Simple installation and synchronization of sun time
- Usable for Heliostats, Tower Receiver CSP and Natural Daylighting System
- 13 hours of automatic tracking and sun mirroring
- User friendly interface for monitoring, setting and upgrading
- USB communication port, RS485
- For surface area up to 3,1 m² and max 90 kg
- Made in Europe

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Sun Tracer Dual-Axis Heliostat for Tower Receiver CSP

Mechanical Capabilities	
Number of turning axis	Dual-Axis
Hour Angle Limit	100°, software and hardware limit
Elevation angle	15-90°, adjustable start
Type of hour-angle engine	Linear Motor SM4S520M2 with stroke of 520 mm
Type of elevation shaft and stroke	Linear Motor SM4S520M2 with stroke of 520 mm
Hour-angle shaft diameter and length	Ø48 mm, L=1450 mm (steel)
Backstructure size	1.250 (H) mm x 1.500 (V) mm
Type of backstructure clamp	Toothed scissors grippers - 4 pcs
Tube diameter for mounting	Ø 60-68 mm (not included with kit)
Max. dimensions of a mirror panel	1 mirror panel with dimensions of 1.250 mm x 2.500 mm with net surface of 3,1 m²
Max. weight of a mirror panel	90 kg
Estimated service life	800-1000h of motor operation (DC motor replace on 8 years if each day one cycle), backup battery replace on 3-5 years if battery in, all other 25 years
Positioning System Data	
Tracking accuracy	< 0.1°
Operating Protocol	TdAPS (Time derived Astronomical Positioning System)
Type of positioner	Din Rail positioner MICRO-D and exterior cables
Type of timer	GMT clock with EOT and calendar
Type of application program for supervision and setting	Solar tracking system monitor via Helios Analytics
Setting and changing data via PC	Yes
Monitoring possibility via PC	Yes
Turned on the position sent from PC	Yes, it turn on position sent from PC, also all other setting can be commanded with string sent from PC
Communication Data	
Type of communication interface	USB interface
Networking solution for control from centre	RS485
Firmware - Software	
Upgrading possibility via PC	Yes, firmware via PC with help of Helios Analytics
Electrical Data	
Motor Power Supply	24 VDC +5% / -15% (2.5A current capacity) SMPS must have 150% inrush current
Backup battery	CR 2512 coin
Standby consumption (when is not moving)	20 mA ±25% @ 24V
Power supply connection	1 piece of 2 Wire Cable with an Internal Cu Conductor of 2,5 mm² (for lengths up to 30 m), (not included with kit)
Environmental Data	
Operating temperature	-25°C to +70°C (optionally with artic grease for temperatures from -40°C up to +70°C)
Operation at humidity	0% to 100%, relative humidity
Max. safe wind speed	max. 120 km/h
Corrosion, weather and chemical resistance	
Hot-dip galvanizing (HDG, EN ISO 1461)	75-100 µm (equivalent of 50 years)
Packaging	
Dimensions of a packed product	1 box of 1600 (L) x 200 (W) x 270 (H) mm
Product weight	45 kg
Quality Certificates	
International Protection Rating (IEC 60529)	IP63
Electromagnetic Compatibility (EMC Directive 89/336/EEC)	Yes
Low Voltage Equipment Directive (EEC Council Directive 73/23/EEC)	Yes
Optional Properties	
Anti-Shadowing Function	No
Heliostat usage	Solar Mirror SolReflex® HM3CIM-3 for additional payment



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